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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,525	09/18/2001	Leonard Alan Collins	171328.01	8577

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EXAMINER

SHAW, PELING ANDY

ART UNIT PAPER NUMBER

2144

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. Amendment received on 07/26/2006 has been entered into record. Claim 69 is amended. Claims 43-69 are currently pending.
2. Amendment received on 02/15/2006 was entered. Claims 28-42 were cancelled. Claims 43-69 were new.
3. Amendment received on 06/30/2005 was entered. Claims 1-27 were cancelled. Claims 28-42 were new.

Priority

4. This application has no priority claim made. The filing date is 09/18/2001.

Claim Rejections - 35 USC § 112, second paragraph

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 43-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claims 43, 50 and 67 recite the limitation of "hole-punching" which renders the claims indefinite. More specific limitation (preamble) should be used. Otherwise, claims 43, 50 and 67, and their dependent claims, i.e. claims 44-49, 51-66 and 68-69 are rejected. For the purpose of applying art, claims are read with no regards the limitation of "hole-punching", i.e. as if the limitation is deleted.
- b. Claims 43, 64 and 67 recite the limitation of "immaterial" which renders the claims indefinite. More specific limitation should be used. Otherwise, claims 43, 64 and 67,

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and their dependent claims, i.e. claims 44-49 and 68-69 are rejected. For the purpose of applying art, claims are read with no regards the limitation of cited the "immaterial", i.e. as if the statement containing the limitation of "immaterial" is deleted.

- c. Claims 44 and 52 recite the limitation of "harmless" which renders the claims indefinite. More specific limitation (preamble) should be used. These claims are thus rejected.
- d. Claim 69 depends upon claim 68 that depends upon claim 67. Claim 67 is a device claim. However claim 69 adds additional limitation, i.e. "embodied computer-executable instructions on a computer-readable medium" that describes the scope of claim 69 as a software per se and thus modifies the nature of dependent claims 67 and 68 not be able to behave like a device as described in claim 67, i.e. means for and prohibit meaningful structure could be used to support "for". Applicant is required to correct the claim language of claim 69, cancel claim 69 and/or add a set of program claims in additional to the method and device claims 43-68.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 43, 47, 49-51, 55-63 and 67-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Srisuresh, et al., (U.S. Patent Number 6,058,431), hereinafter referred as Srisuresh.

- a. Regarding claim 43, Srisuresh disclosed a method comprising: creating a hole-punching message addressed to a remote device and configured to enable a network address translator to create an address mapping; sending the hole-punching message such that the hole-punching message is processed by the network address translator, such that the address mapping is created (column 5, line 45-column 6, line 11, Fig. 2: PC108a initiates an outbound session and transmits data with locally significant IP address to be translated to a globally significant address by the stub router 106).
- b. Regarding claim 47, Srisuresh disclosed the method of claim 43 wherein the creating and the sending of the hole-punching message is initiated by a program (column 8, line 49-53, Fig. 6).
- c. Regarding claim 49, Srisuresh disclosed the method of claim 43 wherein the method is embodied in computer-executable instructions stored on computer-readable media (column 8, line 49-53, Fig. 6).
- d. Regarding claim 50, Srisuresh disclosed a method performed by a program (column 8, line 49-53, Fig. 6) operating on a local device, the method comprising: creating a hole-punching message addressed to a remote device; configuring the hole-punching message to enable a network address translator to create a unique address mapping; sending the hole-punching message; and wherein the hole-punching message is received and processed by the network address translator such that the unique address

mapping is created , such that a subsequent unsolicited communication sent from the remote device to the program via the network address translator is forwarded to the program utilizing the unique address mapping (column 5, line 45-column 6, line 11, Fig. 2: PC108a initiates an outbound session and transmits data with locally significant IP address to be translated to a globally significant address by the stub router 106).

- e. Claim 51, 55-56, 61 and 67 are of the same scope as claim 50. These are rejected for the same reasons as for claim 50.
- f. Regarding claim 57, Srisuresh disclosed the method of claim 50 wherein the unique address mapping includes a public address of the remote device (column 5, line 61-62: IP destination address).
- g. Regarding claim 58, Srisuresh disclosed the method of claim 50 wherein the unique address mapping includes a private address of the local device (column 5, line 59-60: locally significant source IP address).
- h. Regarding claim 59, Srisuresh disclosed the method of claim 50 wherein the unique address mapping is operative for communications formatted using Transmission Control Protocol (column 4, lines 17-37: TCP).
- i. Regarding claim 60, Srisuresh disclosed the method of claim 50 wherein the unique address mapping is operative for communications formatted using User Datagram Protocol (column 4, lines 17-37: UDP).

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- j. Regarding claim 62, Srisuresh disclosed the method of claim 50 wherein the local device is coupled to the network address translator via a private network (column 4, lines 17-37: private address domain).
- k. Regarding claim 63, Srisuresh disclosed the method of claim 50 wherein the network address translator is coupled to the remote device via the Internet (column 4, lines 17-37: public address domain, IP v.4).
- l. Claim 68 is of the same scope as claims 59-60. It is rejected for the same reasons as for claims 59-60.

Srisuresh disclosed all limitations of claims 43, 47, 49-51, 55-63 and 67-68. Claims 43, 47, 49-51, 55-63 and 67-68 are rejected under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srisuresh et al. (US 6058431 A), hereinafter referred as Srisuresh, and further in view of Berg et al. (US 6674713 B1), hereinafter referred as Berg.

- a. Srisuresh disclosed claim 50 as above. Srisuresh does not show (claim 65) wherein the hole-punching message is formatted to include a NULL content field.

- b. Berg shows (claim 65) wherein the hole-punching message is formatted to include a NULL content field (column 22, line 25-44: NUL segment) in an analogous art for the purpose of method and apparatus for providing continuous voice and call communications between a data network and a telephony network.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Srisuresh's functions of system and method for network address translation as an external service in the access server of a service provider with Berg's functions of using null packet.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use a null packet for keeping packet data connection alive per Berg's teaching (column 22, lines 25-44) in providing network accessing control per Srisuresh (column 2, lines 27-45: using a network address translator on an access server for locally and globally IP address translation) and Berg (column 17, lines 9-17: RUDP is used as a simple packet based transport protocol and provides reliable in-order delivery for virtual connection)'s teaching.
- e. Regarding claim 66, Srisuresh shows wherein the hole-punching message is formatted using Transmission Control Protocol or User Datagram Protocol (column 4, lines 17-37: TCP/UDP).

Together Srisuresh and Berg disclosed all limitations of claims 65-66. Claims 65-66 are rejected under 35 U.S.C. 103(a).

Response to Arguments

8. Applicant's arguments filed on 07/26/2006 have been fully considered, but they are not persuasive.

- a. In response to applicant's argument on rejection items a-c of section 4, i.e. in Claim Rejections - 35 USC § 112, second paragraph in the office action dated 04/27/2006, examiner still can not limit the claim language for claims 43-44, 50, 52, 64 and 67 as per applicant suggests. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The descriptive claim language, e.g. hole-punching, immaterial, harmless, does not provide specific limitations on the claimed invention rather renders as in conceptual or theoretical description on the intended invent that does not scope the claimed invention properly. Thus it is suggested that more specific limitations should be defined for the claimed invention.
- b. In response to applicant's arguments on rejection item a of section 6, i.e. in Claim Rejections - 35 USC § 102 in the office action dated 04/27/2006, applicant has stated that "...the hole-punching message is not really an invitation because it need not reach the remote device." This is not specified in the claim language. See also paragraph 37 of applicant's specification as quoted "The directory service of FIG. 6 may be used for this purpose, or the port may be communicated to device 118 in the hole-punching message itself. In the latter case, unlike in the example of FIG. 3, it is important that the hole-punching message actually reach device 118." Examiner

interprets that the hole-punching message could reach device 118 and applicant needs to explain how device 118 would learn the hole if the hole-punching message does not reach device 118. As for the limitation of "immaterial" is addressed as per applicant suggested above in item a.

- c. Applicant has further argued items d-e of section 6, i.e. in Claim Rejections - 35 USC § 102 in the office action dated 04/27/2006, examiner has reviewed the claim language and applicant's argument. The claim language and current argument seem to follow the similar arguments and claim language per claim 43, thus the above response, i.e. as in item b, should apply. Particularly, applicant seems to read the specification in general into the claim language. Examiner can only interpret the claim language in light of applicant's specification. Applicant needs to be more specific in the claim language to draw distinct features from the applied prior arts.
- d. It is the Examiner's position that Applicant has not submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art. As it is Applicant's right to claim as broadly as possible their invention, it is also the Examiner's right to interpret the claim language as broadly as possible. It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique (see item a in section 5). As it is well known in the network address translation technology that a network address translator is provided address translation between a public network, e.g. Internet, and a private network, e.g. an intranet. The registration

of IP address/port translation is specified in various RFCs under IETF. Srisuresh is used to illustrate how the network address translation is used. Additional arts exist on the application of network address translation, e.g. items a-b in Remarks section below. It is clear that Applicant must be able to submit claim language to distinguish over the prior arts used in the above rejection sections that discloses distinctive features of Applicant's claimed invention. It is suggested that Applicant compare the original specification and claim language with the cited prior art used in the rejection section above or the Remark section below to draw an amended claim set to further the prosecution.

- e. Failure for Applicant to narrow the definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant's intent to broaden claimed invention. Examiner interprets the claim language in a scope parallel to the Applicant in the response. Examiner reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Remarks

9. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Egevang et al. (RFC 163, May 1994) The IP Network Address Translator
- b. BODEN et al. (US 6266707 B1) System and method for IP network address translation and IP filtering with dynamic address resolution

Conclusion

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

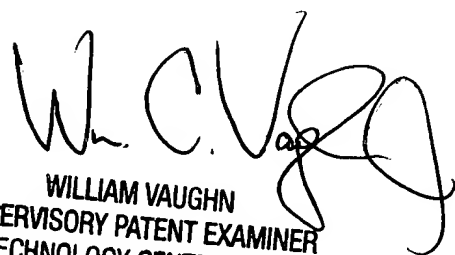
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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